

2. Zoological Results of the Third Tanganyika Expedition, conducted by Dr. W. A. Cunningham, 1904-1905.—Report on the Isopoda terrestria. By the Rev. THOMAS R. R. STEBBING, M.A., F.R.S., F.L.S., F.Z.S.*

[Received April 23, 1908.]

(Plate XXVII. †)

The small collection of African Land-Isopoda which Dr. Cunningham has asked me to examine includes only four species. Two of these are already known. The other two appear to require the institution of a new genus. Whether the species for which it is instituted are themselves new may be more open to question. It is with much reluctance that I accept the responsibility of offering a decision. In the balance of uncertainties one has at last to make up one's mind. At present there are a bewildering number of species in the genus *Philoscia*, many of them very incompletely described, and few, if any of them, completely illustrated. A remedy for this state of affairs will not be easily found. The creatures themselves put difficulties in the way of the student. Their readiness to wander about the world undermines any systematic structure built on geographical distribution. Their variability seems to separate forms which are specifically identical. On the other hand, general resemblance seems to unite forms which, on closer examination, are found to be distinct. Among the appendages the antennæ and uropods afford especially useful characters, and these appendages are particularly liable to be detached or broken. The structure of the pleopods, especially those of the male, is more and more acquiring systematic importance, but male specimens are not always available. Fortunately there are naturalists to whom difficulties are not discouragements so much as incentives to action. This paper will serve at least some useful purpose if it should induce any such investigator to deal effectively with the genus *Philoscia* and its immediate allies.

Fam. ONISCIDÆ.

Gen. METOPONORTHUS Budde-Lund.

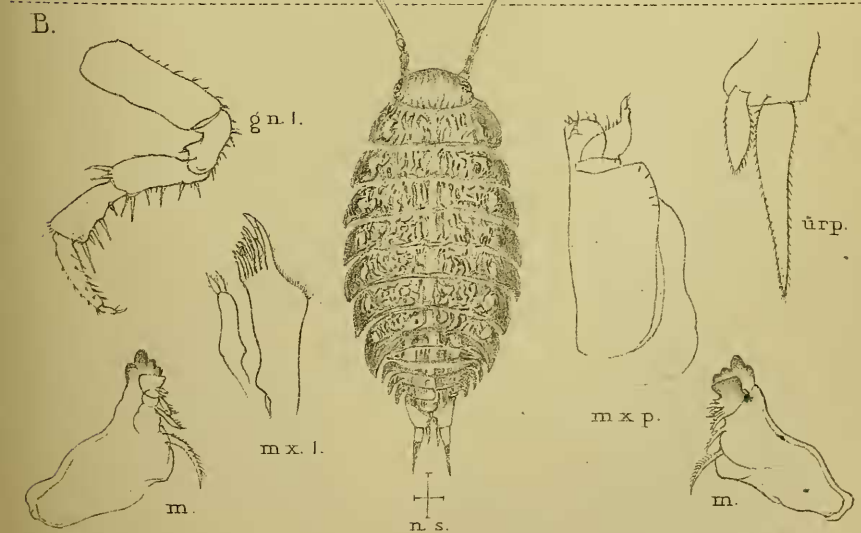
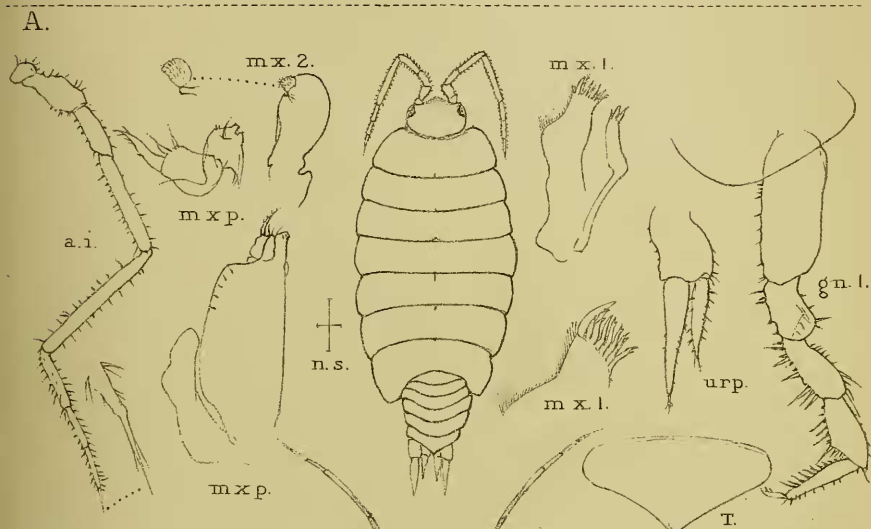
1885. *Metoponorthus* Budde-Lund, *Isopoda terrestria*, p. 161.

METOPONORTHUS PRUINOSUS (Brandt).

1833. *Porcellio pruinosis* Brandt, *Conspectus Crust. Oniscod.* pp. 19, 26 (Budde-Lund).

* [The complete account of the new genus diagnosed in this communication appears here, but since the name and the preliminary diagnosis were published in the 'Abstract,' the genus is distinguished by being underlined.—EDITOR.]

† For explanation of the Plate, see p. 560.



Del. T.R.R. Stebbing

J. T. Reid Lith. Edin.

A. ANCHIPHILOSCIA KARONGAE, n. sp. B. A. CUNNINGTONI, n. sp.
C. PERISCYPHIS CONVEXUS (Buddé-Lund).

1879. *Metoponorthus pruinosus* Budde-Lund, Prospectus Crust. Isop. terrest. 4.

1885. *Metoponorthus pruinosus* Budde-Lund, Isopoda terrestria, p. 169.

Of this well-known and widely distributed species there is a single specimen in the collection, found under stones on beach, Island Camp, Birket el Qurun.

ANCHIPHILOSCIA Stebbing.

Abstr. P. Z. S. 1908, p. 28 (May 26).

Mandibles with setulose lobe adjoining the inner cutting-plate, and with two to three plumose setæ between this lobe and the unjointed plumose lash which represents the molar. First maxillæ with eight spines at the apex, and the strongly sinuous distal part of the outer margin fringed with fine setules, which are much longer proximally and a little longer distally than those in the middle of the series. Second maxillæ with a small, clearly defined, finely setulose inner plate, not longer than broad; the outer part of the maxilla much broader, pellucid, almost unarmed, without apical cleft. Maxillipeds with terminal joint of palp distinguishable from the second. Telsonic segment triangular.

The genus *Philoscia* was established by Latreille in 1804. Both in French and Latin the name is on that occasion printed *Philoscie*, but it has always been presumed that the Latin form was due to a printer's error. *Oniscus sylvestris* Fabricius, which is the same as the earlier *O. muscorum* Scopoli, is the only species mentioned in connection with the genus at its institution. In any re-arrangement, therefore, of the very numerous forms which are at present united under Latreille's generic name, it is clear that Scopoli's species must be the standard for those to be retained under *Philoscia*.

The new genus characterised above agrees in general with the definition of *Philoscia* given by Budde-Lund in 1885 (Isopoda terrestria, p. 207), A. Dollfus in 1897 (Feuille des Jeunes Naturalistes, No. 317, p. 1), and Sars in 1898 (Crustacea of Norway, vol. ii. p. 172). Thus, it has the body oval or elongate, scarcely contractile. The lateral lobes of the head are sharply deflexed. The first segment of the peræon has the hind margin regularly curved. The pleon is more or less abruptly narrower than the peræon. The second antennæ are slender, with three-jointed flagellum. The rami of the uropods extend beyond the telsonic segment, and the inner ramus is articulated to the peduncle not far in front of the outer.

On the other hand, in the mandibles, where *P. muscorum* has only one penicil or plumose seta, the new genus has three penicils on the left and two on the right mandible. In this respect it agrees with the minutely described and carefully illustrated *Anaphiloscia simoni* Racovitza (Arch. zool. expérimentale, vol. vii.

p. 185, 1907), but it has the setulose lobe with which in Racovitza's genus the mandible is not equipped. The first maxillæ have eight spines on the outer plate, whereas in *Paraphiloscia stenosoma* Stebbing (Wiley's Zoological Results, part v. p. 648, 1900) they have only three apical spines on that plate. The outer margin of that plate is more strongly sinuous and less uniformly fringed than in *P. muscorum*. The second maxillæ have the inner setulose lobe distinctly defined and the much broader outer lobe undivided; while in *P. muscorum* the outer lobe is longitudinally cleft and the setulose lobe has no distinct lower margin, nor is this margin mentioned by Racovitza, in whose species the second maxilla otherwise resembles that of *Anchiphiloscia*. In the maxillipeds the articulation between the second and third joints of the palp is in this genus discernible under high magnification. Racovitza declares this palp to be clearly only two-jointed in *A. simoni*. In the latter species the telson is almost semicircular, in the species referred to the present genus it is triangular. The two species in question are in many respects in close agreement, but one of them has the pleon abruptly narrower than the peræon, with the lateral apices of the pleon segments inconspicuous from above, while in the other the narrowing of the pleon is far less abrupt, and the apices of the third, fourth, and fifth segments as seen from above are well separated and conspicuously displayed.

The generic name is compounded of ἀγχι, near, and *Philoscia*.

ANCHIPHILOSCIA KARONGÆ, sp. n. (Plate XXVII., A.)

This species shows a close resemblance to *Philoscia suarezi* Dollfus, from Diego Suarez in North Madagascar (Mém. Soc. Zool. de France, vol. viii. p. 185, fig. 7 in text, 1895), of which, however, the mouth-organs are not described. Independently of these, other features seem to make the identification inadmissible. These affect the second antennæ, the uropods, and the telson.

The body is rather narrowly oval, the head not broad, the last peræon segment strongly arched over the pleon and then turning obliquely outwards on either side, not forming acute apices. The pleon is brusquely narrower than the peræon, and the adpressed lateral angles of the third, fourth, and fifth segments are not discernible from above. The telsonic segment is broader than long, with the sides straight, but the point not blunted as in *P. suarezi*.

The sides of the head curve in towards the front, with the eyes situated at the angles so formed. The small first antennæ have the second joint intermediate in thickness between the stout first and tapering third, the latter being scarcely longer than the second, and a little shorter than the first. The second antennæ are longer than half the body, the second joint a little longer than the third but much shorter than the fourth, the fifth nearly as long as the third and fourth combined and as long as the flagellum; in this the first joint is longer than the second, but

scarcely longer than the third (without reckoning the brush-like setiform apical process), therefore not as in *P. suarezi* nearly equalling in length the two together. In the example figured, however, the third joint is a little shorter than the second.

The upper lip has its distal margin evenly rounded. The cutting-edge of the mandible is divided into four horny-looking blunt teeth. The secondary plate on the left mandible has the same horny appearance, but that on the right is pellucid. The other features have been already discussed. The first maxillæ have the two plumose setæ seated on the inner part of the apex; of the spines on the outer plate the outermost is, as usual, the strongest; of the three following the intermediate is short; to these simple spines succeed four, each with a subapical tooth. The second maxillæ have been already discussed. The maxillipeds have the plate of the large and long second joint extending to the apex of the palp's second joint, notched at the inner distal angle, where it has one minute spine-tooth, a little behind which a regular spine rises from a little surface-lobe, and at the outer distal angle the apical margin has two more spine-teeth, also of very small size. The second joint of the palp is furnished with one or two setiform spines, and the slender, faintly separated third joint has setules on the outer margin and apex.

The first gnathopods have the third, fourth, and fifth joints much broader than the sixth; the fourth and fifth subequal in length, strongly spined on the hind margin, the fourth with a row of tiny denticles on the proximal part of its front margin, the fifth with oblique rows of spinules on the inner surface, the distal series projecting beyond the obliquely truncate distal margin; the sixth joint has the hind margin proximally furred with spinules.

The fifth pereopods are, as usual in the allied forms, the longest of the limbs. They have the fourth joint shorter than the third or fifth, and the fifth shorter than the sixth. In the young, taken from the mother's pouch, with eyes and other parts well developed, no trace of these limbs could be discerned.

Uropods with inner ramus attached on a level with the outer, compared with which it is not exceptionally narrow as in *P. suarezi*, and it is more than half as long. Each ramus is tipped with a tuft of setæ. Telson in young rounded.

Dimensions about 6 mm. in length by 2.75 mm. in breadth.

Locality. On damp decaying wood close to swamp, Kambwe, near Karonga.

For the colouring comment will conveniently be made in comparison with the next species.

ANCHIPHILOSCIA CUNNINGTONI, sp. n. (Plate XXVII., B.)

This species is in striking agreement with the preceding in regard to the antennæ and all the minute details of the mouth-organs, but the head is wider and the hinder segments of the pereon have their postero-lateral angles more acute, the hind

margin of the seventh segment being uniformly arcuate and strongly produced over the pleon; the third, fourth, and fifth pleon segments are not adpressed, but have their postero-lateral angles well displayed; the convergent sides of the telson are slightly incurved. The first gnathopods have the sixth joint a little less widened distally than in the other species, but the difference is slight. The uropods have the inner ramus attached slightly in advance of the outer, which is fully double its length, therefore relatively much longer than in *P. annulicornis* Budde-Lund, as shown in the figure by Dollfus (Mém. Soc. Zool. de France, vol. viii. p. 184, 1895), from Diego Suarez.

In the general colouring of brown, variegated with lighter markings, on the back, this species agrees with *Philoscia muscorum* and several allied species. It has a thin light stripe extending from the back of the head nearly to the tip of the telson. In the pereon this is flanked on either side by a broad piece of variegated pattern, while the side-plates are dark, each with one conspicuous light patch, but not, as in *P. annulicornis*, having the postero-lateral angles pellucid. In the pleon the first two segments and the telsonic segment have each three light patches—one belonging to the medio-dorsal stripe, the others separated from it by dark patches. The second antennæ have the long fifth joint proximally dark and distally light. The uropods have the peduncles generally light and also the proximal part of the outer ramus; but this is variable, as one specimen shows one of these rami light to the apex, though the other is dark except close to the base.

In *A. karongæ* the colour is similar, but rather more dusky, the medio-dorsal stripe being also less continuous, and in one specimen the hinder segments of the pereon have their apices clear instead of dark.

Dollfus (*loc. cit.*) remarks of *P. annulicornis*: "This species is variable; the specimens of the type (coming from Mount Ambre) are all of great size (12 mm. by 6.5 mm.). Generally, above all in the plain, the length does not exceed 7 to 8 mm.; sometimes the joints of the flagellum of the second antennæ are subequal; but above all there are varieties *ex colore*: the clear spaces at the angles of the pereon may be lost, or instead of them there may be marblings or patches [such as those] situated in the median region; the antennæ are often either entirely light or entirely dark." The original says, "les taches claires des angles du pereion peuvent s'effacer, ou être remplacées par des marbrures ou taches situées dans la région médiane," where a word or two seems to be missing from the second clause.

Specimens of *A. cunningtoni* measured 7 mm. by 3.5 mm., or 6 mm. by 3 mm., the antennæ and uropods in each case not included.

Locality. Under stones, near Niamkolo Bay, Lake Tanganyika.